

CLAIMS

What is claimed is:

- 1 1. An apparatus comprising:
2 an oscillator; and
3 a delay unit to provide a delay in response to an output of the oscillator, and to
4 provide an output to be used as a power-on reset signal.
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- 1 2. The apparatus according to claim 1, wherein the delay unit is logic that provides
2 a delay in response to an input signal.
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- 1 3. The apparatus according to claim 1, wherein the delay unit is a counter.
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- 1 4. The apparatus according to claim 3, wherein the counter is at least one of a
2 binary counter, a decimal counter and a shift register counter.
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- 1 5. The apparatus according to claim 1, wherein the oscillator is at least one of a ring
2 oscillator, an LC oscillator and an RTC oscillator.
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- 1 6. The apparatus according to claim 1, wherein elements of the delay unit and the
2 oscillator are chosen to have similar power-on behavior to an electronic device in which
3 the apparatus is included.
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1 7. The apparatus according to claim 1, wherein elements of the delay unit and the
2 oscillator are chosen to have similar power-on behavior elements in a library used to
3 design an electronic device in which the apparatus is included.

1 8. The apparatus according to claim 1, wherein elements of the delay unit and the
2 oscillator are chosen from elements in a library used to design an electronic device in
3 which the apparatus is included.

1 9. The apparatus according to claim 1, wherein the oscillator includes at least one
2 inverter.

1 10. The apparatus according to claim 3, wherein the counter includes at least one
2 latch.

1 11. The apparatus according to claim 10, wherein at least one latch in the counter
2 favors a known state.

1 12. The apparatus according to claim 10, wherein each latch in the counter favors a
2 known state.

1 13. The apparatus according to claim 10, wherein the counter includes at least two
2 latches, and at least a most significant bit latch of the latches in the counter favors a
3 known state.

1 14. The apparatus according to claim 1, wherein the power-on reset signal is
2 provided to enable the oscillator.

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1 15. The apparatus according to claim 14, further comprising a NAND gate having an
2 input coupled to the power-on reset signal and an output coupled to an input of the
3 oscillator, the NAND gate to enable the oscillator.

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1 16. The apparatus according to claim 1, further comprising a buffer at an output of
2 the delay unit to provide the power-on reset signal.

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1 17. The apparatus according to claim 16, wherein the buffer is an inverter.

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1 18. The apparatus according to claim 16, wherein the buffer is coupled to an output
2 of the delay unit.

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1 19. The apparatus according to claim 16, wherein the buffer is included in the delay
2 unit.

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1 20. The apparatus according to claim 1, wherein the apparatus is included in an
2 electronic device and the power-on reset signal is provided within the electronic device.

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1 21. The apparatus according to claim 20, wherein the electronic device is at least
2 one of an integrated circuit, a chip, a chip set, a digital electronic device, a micro-

3 controller, a microprocessor, a controller, a processor, a small form factor device, a cell
4 phone, a cell phone chip, a cell phone chip set, a next generation cell phone, a next
5 generation cell phone chip, a next generation cell phone chip set, an electronic circuit,
6 an embedded micro-controller, a telecommunications device, a speaker phone, and an
7 electronic device with state retention.

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1 22. The apparatus according to claim 1, wherein the apparatus is included in an
2 electronic device and the power-on reset signal is provided externally from the
3 electronic device.

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1 23. A system comprising:
2 an electronic device, including:
3
4 an oscillator; and
5 a delay unit to provide a delay in response to an output of the oscillator,
6 and to provide an output to be used as a power-on reset signal.

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1 24. The system according to claim 23, wherein the delay unit is logic that provides a
2 delay in response to an input signal.

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1 25. The system according to claim 23, wherein the delay unit is a counter.

1 26. The system according to claim 25, wherein the counter is at least one of a binary
2 counter, a decimal counter and a shift register counter.

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1 27. The system according to claim 23, wherein the oscillator is at least one of a ring
2 oscillator, an LC oscillator and an RTC oscillator.

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1 28. The system according to claim 23, wherein elements of the delay unit and the
2 oscillator are chosen to have similar power-on behavior to the electronic device.

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1 29. The system according to claim 23, wherein elements of the delay unit and the
2 oscillator are chosen to have similar power-on behavior elements in a library used to
3 design the electronic device.

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1 30. The system according to claim 23, wherein elements of the delay unit and the
2 oscillator are chosen from elements in a library used to design the electronic device.

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1 31. The system according to claim 23, wherein the oscillator includes at least one
2 inverter.

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1 32. The system according to claim 25, wherein the counter includes at least one
2 latch.

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1 33. The system according to claim 32, wherein at least one latch in the counter
2 favors a known state.

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1 34. The system according to claim 32, wherein each latch in the counter favors a
2 known state.

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1 35. The system according to claim 32, wherein the counter includes at least two
2 latches, and at least a most significant bit latch of the latches in the counter favors a
3 known state.

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1 36. The system according to claim 23, wherein the power-on reset signal is provided
2 to enable the oscillator.

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1 37. The system according to claim 36, further comprising a NAND gate having an
2 input coupled to the power-on reset signal and an output coupled to an input of the
3 oscillator, the NAND gate to enable the oscillator.

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1 38. The system according to claim 23, further comprising a buffer at an output of the
2 delay unit to provide the power-on reset signal.

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1 39. The system according to claim 38, wherein the buffer is an inverter.

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1 40. The apparatus according to claim 38, wherein the buffer is coupled to an output
2 of the delay unit.

1 41. The apparatus according to claim 38, wherein the buffer is included in the delay
2 unit.

1 42. The system according to claim 23, wherein the power-on reset signal is provided
2 within the electronic device.

1 43. The system according to claim 23, wherein the electronic device is at least one of
2 an integrated circuit, a chip, a chip set, a digital electronic device, a micro-controller, a
3 microprocessor, a controller, a processor, a small form factor device, a cell phone, a cell
4 phone chip, a cell phone chip set, a next generation cell phone, a next generation cell
5 phone chip, a next generation cell phone chip set, an electronic circuit, an embedded
6 micro-controller, a telecommunications device, a speaker phone, and an electronic
7 device with state retention.

1 44. The system according to claim 23, wherein the power-on reset signal is provided
2 externally from the electronic device.

1 45. A method comprising:
2 oscillating; and
3 delaying an output of the oscillating to provide a power-on reset signal.

1 46. The method according to claim 45, wherein the delaying of the output of the
2 oscillating is provided by counting.

1 47. The method according to claim 45, further comprising providing the power-on
2 reset signal to enable the oscillating.

1 48. The method according to claim 45, wherein the power-on reset signal is provided
2 within an electronic device.

1 49. The method according to claim 48, wherein the electronic device is at least one
2 of an integrated circuit, a chip, a chip set, a digital electronic device, a micro-controller,
3 a microprocessor, a controller, a processor, a small form factor device, a cell phone, a
4 cell phone chip, a cell phone chip set, a next generation cell phone, a next generation
5 cell phone chip, a next generation cell phone chip set, an electronic circuit, an
6 embedded micro-controller, a telecommunications device, a speaker phone, and an
7 electronic device with state retention.

1 50. The method according to claim 45, wherein the power-on reset signal is provided
2 externally from an electronic device.

1 51. The method according to claim 46, wherein the counting counts a designated
2 number of cycles, wherein the power-on reset signal is asserted when the counting

- 3 begins counting the designated number of cycles and is de-asserted when the counting
- 4 finishes counting the designated number of cycles.